

DISCUSSION OF THE AMENDMENT

Claims 1-5, 10-11 and 15-20 are pending in the present application. Claims 15 and 19-20 are presently withdrawn from active prosecution. Claims 6-9 and 12-13 are canceled claims. Independent Claim 1 is amended herein to recite features from previously pending Claims 8 and 9.

No new matter is added.

REMARKS

Claim 1 is drawn to a mesoporous luminescent material that comprises a polymer of an organic silicon compound and another luminescent compound which is in at least one of the particular states now cited in Claim 1. Applicants submit the presently claimed invention is both novel and not obvious over the art of record.

The terms “bonded to,” “adsorbed on,” “filled in,” and “mixed with” are described in paragraphs [0014], [0184]; [0188] and the Examples of the PG publication, i.e., US 2007/0202353.

35 U.S.C. § 112

Applicants submit the text of Claim 1 “a polymer of an organic silicon compound represented by the following formula (1)” is readily understood and clear to those of skill in the art. The claimed invention is a mesoporous luminescent material that comprises a polymer. The polymer, as described in the text quoted from Claim 1 above, is a polymer of units of an organic silicon compound of the particular formula described in Claim 1.

The Office’s assertion that those of skill in the art would mis-interpret the claim in a manner such that the luminescent material does not make sense. It is an explicit requirement of Claim 1 that the polymer is a polymer of the organic silicon compound. The Office fails to set forth any reasonable basis for asserting that those of skill in the art could interpret this text in the manner alleged on page 5 of the April 19 Office Action.

Applicants respectfully request withdrawal of the rejection.

35 U.S.C. § 102/103

Independent Claim 1 now recites features from previously pending Claims 8 and 9. Applicants submit the rejection of the claims as anticipated by Shea 1992 (J. Am. Chem.

Soc., 1992, 114 pp. 6700-6710); Shea 1989 (Chem. Mater. 1989, 1, pp. 572-574) and Fan (U.S. 2003/0039744) should be withdrawn because Claims 8 and 9 were not rejected as anticipated by any of the Shea 1992, Shea 1989 or Fan references.

The Examiner rejected Claims 8-11 as obvious over Shea 1989 in combination with Bartl (Chem. Commun. 2002, pp. 2474-2475).

The present claims which recite a particular polymer and a particular porous structure describes an invention which provides improved luminescence efficiency and reduced quenching. Higher luminescence is thus achieved.

The pores of the claimed invention permit the adsorption of a second luminescent material. The presence of both the mesoporous luminescent material and the second luminescent material (i.e., the “another luminescent material” recited in the claims) permits energy transfer between the two luminescent materials. This in turn allows a multi-wavelength emission to be achieved; namely, the emission of one material causes the other material to emit light of a different wavelength.

The Office concedes that Shea 1989 does not describe a porous siloxane polymer that includes another luminescent compound such as a rare earth material complex. Applicants submit that the Bartl reference fails to cure the defects of Shea 1989. While Bartl may describe encapsulation of rare earth material complexes, the Bartl reference does not suggest any mesoporous luminescent material that includes the particular polymer recited in the present claims in combination with any rare earth material. Instead, Bartl describes a complex of a rare earth material and an organic material that is doped on a silica thin film that is different from the polymer recited in Claim 1.

Not only does Bartl fail to suggest the particular structural characteristics of the claimed invention, Bartl fails to suggest that any energy transfer between electroluminescent materials can occur such that a multi-wavelength emission is realized.

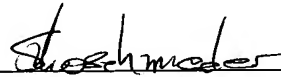
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Applicants thus respectfully request withdrawal of the rejection.

For the reasons discussed above in detail, Applicants request withdrawal of the rejections and the allowance of all now-pending claims.

Respectfully submitted,

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